Montana Department of Fish, Wildlife & Parks

May 31, 1996

1420 East Sixth Avenue
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Helena, MT 59620-0701

Environmental Quality Council
Montana Historical Society, State Historical Preservation Office
Montana State Library
Jim Jensen, Montana Environmental Information Center
Big Blackfoot Chapter of Trout Unlimited
Janet Ellis, Montana Audubon Council
Powell County Conservation District
Montana Wildlife Federation
Fish, Wildlife and Parks
    Missoula Headquarters
    Fisheries Division
    Resource Assessment - John Mundinger
    Non-Game Coordinator - Dennis Flath
Environmental Protection Agency
Army Corps of Engineers
U.S. Fish and Wildlife Service

Dear Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) is submitted for your consideration. It was prepared for the proposed Future Fisheries Improvement project on Rock Spring Creek (a tributary of the North Fork of the Blackfoot River). This project includes narrowing the stream channel, increasing average depth, installing proper riffle/pool ratio, increase the stream's ability to carry sediment and initiate a low impact riparian grazing system.

Questions and comments will be accepted until 5 p.m., June 20, 1996. If you have questions, feel free to contact me at (406) 444-2432. All comments should be sent to the undersigned.

Thank you for your interest.

Sincerely,

Bruce J. Rehwinkel
Habitat Protection
Fisheries Division

Powell

ENVIRONMENTAL ASSESSMENT

IMPLEMENTATION OF A FUTURE FISHERIES PROJECT ON ROCK SPRING CREEK

Prepared by
Montana Fish, Wildlife & Parks
May 31, 1996

GENERAL PURPOSE:

The 1995 Montana Legislature enacted statute 87-1-272 & 273, MCA which directs the Montana Department of Fish, Wildlife & Parks (FWP) to restore and improve degraded wild fisheries. The legislation established a one-time funding account to ensure that this function would be accomplished. Rock Spring Creek project described herein is one of 39 project applications made by the February 1, 1996 deadline.

BACKGROUND:

The aquatic habitats of Rock Spring Creek were degraded by past grazing practices. Past grazing was done generally through a single pasture arrangement with season long livestock use.

The landowner has implemented an improved grazing system and instituted stricter time controlled pasture management. This system utilizes a five pastures for rotation during the period of June 1 through August 31 of each year. Each pasture is grazed each year, but for varying times and in different months. This modified livestock use has allowed woody riparian plants to begin to recover along the stream corridor (see attached grazing plan).

Rock Spring Creek is an important fishery tributary to the North Fork of the Blackfoot River and the mainstem. The spring creek is recognized as a critical tributary for the spawning and rearing of native fish species such as bull trout and cutthroat trout. The proposed project will complete work that was initiated in 1992 by finishing the necessary restoration on the entire lower section of the stream under the ownership of the Krutar Ranch. The project will also complement and facilitate work being planned by the Department and Trout Unlimited on upstream sections of Rock Creek in the Kleinschmidt Flats area. Work completed on the stream in 1992-94 resulted in 800 to 1000 percent increases in spawning activity of rainbow and brown trout as measured by DFWP staff (Peters and Pierce). The project proposed herein will connect stream segments already restored and should yield results similar to or exceeding the previous work and will be especially advantages to the native species of special concern.

I. DESCRIPTION OF THE PROPOSED ACTION:

The proposed project is initially a channel restoration project and later, and once the channel is restored, it becomes a channel protection effort.

As previously stated, the channel of Rock Spring Creek has been overly widened and filled with silt from the adjacent banks. This project will restore proper fluvial geometry to the stream. Additionally, the channel will be narrowed and deepened. A natural riffle/pool ratio and spacing will be constructed which will ensure that the new stream channel will be able to effectively transport sediment. The constructed pools will be deepened and should offer a cooler holding area for fish.

The total area involved in this work will be approximately 1800 feet of stream channel.

Once the stream channel work is completed, temporary electric fencing will be installed to protect the streambanks from livestock impacts. The total exclusion of livestock from the riparian corridor will last long enough to establish the desired vegetation (probably 2 to 4 years). Livestock in the later years will be managed through pasture rotation (see attached grazing plan).

A. Location of Project

The project will be accomplished within Township 14 North, Range 11 West, Section 5 of Powell County. The actual work will be done on 1800 feet of stream channel with the land ownership of Jon Krutar Ranch. If successful, this project will furnish salmonid recruitment to the entire North Fork and the adjacent Blackfoot River.

B. Project Benefits

Species of Fish:

Native species such as bull trout and cutthroat trout will benefit as well as rainbow and brown trout. The North Fork/Rock Creek system has been identified by the Department as one of the three most critical areas in the Blackfoot River drainage for native species. The restoration of this important spawning and rearing tributary has the potential to greatly increase recruitment of native and non-native fish to both the North Fork of the Blackfoot and the mainstem Blackfoot.

Protect and Enhance Wild Fish Habitat:

The aquatic habitat is currently degraded in the reach that is planned for restoration. This degradation was the result of past grazing practices. The present landowner has implemented a new grazing management system and has installed fencing to restrict access to the stream. Restoring proper fluvial geometry will narrow the stream, create a greater average depth, restore a proper riffle/pool ration, increase the competence of the stream to move entrained sediment, create additional and deeper pool habitat and decrease water temperatures.

Fish Population/Fishing Improvement:

This project does not seek to improve fishing opportunities on Rock Creek itself. The fish population of Rock Spring Creek -both resident and seasonal - will improve. However, this restoration effort is intended to provide additional young fish for the North Fork and mainstem Blackfoot River. It is in these larger stream sites where the produced fish will grow to sufficient size to offer angling opportunity.

Previous work in this general area has been documented with 800-1000 percent increases in spawning use following similar project work. Completing this project, which connects earlier restored sections, is expected to increase numbers of spawning redds at a similar rate. Certainly, as each project results in added successful spawning contribution, the next successful project may even experience progressively greater levels of spawning use as the population of mature adults expands.

Public Benefits:

The public will realize increased wild fish populations, particularly the native species - cutthroat and bull trout. The public will realize increased fishing opportunity resulting from increased fish populations. The public will realize better water quality as a result of completing the project. Landowner relations should improve as a result of the public fund contributions allowing this project to become a reality for the private landowner. Bull trout recovery should be one step closer to becoming a reality. Lastly, the public has access to important resource based education and touring opportunities on this project site.

II. IMPACTS TO THE PROPOSED ACTION

Please review the attached checklist. The proposed project will restore function to the previously degraded channel of Rock Spring Creek.

A. Impacts to the Physical Environment

1. Terrestrial & Aquatic Life and Habitats

Habitat for riparian dependent wildlife will be restored through the efforts of this project. The cover component of this habitat - once restored - will result in a vastly more attractive and productive wildlife travel route.

Fishery benefits of this project include greater channel stability, superior stream cover, improved stream shading and better spawning conditions.

2. Water quality, quantity and distribution

Short-term increases in turbidity will occur during project construction. Since this reach of Rock Spring Creek functions entirely as a spring creek, there are no periods of very high or very low flow. Work will have to be accomplished at the constant base flow level. A "3A" permit for short-term exemption from turbidity standards has been obtained from the Water Quality Division; permit conditions will be followed.

In the long-term, measures to stabilize and minimize erosion will improve water quality. Streamflow is not expected to be changed by this project.

3. Geology and soil quality, turbidity and moisture

No effects on the areas geology are expected to occur above the active high-water mark. Some of the soils located above and/or adjacent to the high-water mark will likely become better drained as a result of a deeper and more well defined stream channel.

The effects of this project on the geology below the high-water mark are to curtail sediment contribution from the currently "filled" stream channel. Additionally, once the stream channel is properly designed, the sediment that enters the channel, should be transported and deposited in appropriate locations at the channel side and not filling the channel itself.

4. **Vegetation cover, quantity and quality**

This project will eventually restore the riparian plant community to a natural condition. Presently, the riparian has begun its recovery process as a result of changed livestock management. Once the stream configuration is restored and the livestock grazing system is initiated, the riparian should continue the recovery. This process of vegetative recovery will require many years, but should progress in a predictable fashion as long as the livestock influence is managed within the tolerance of the riparian plant community.

5. **Aesthetics**

The aesthetics of the area is presently degraded. The general appearance of the stream-side corridor will be much improved once the riparian community recovers. Additionally, the general appearance of Rock Spring Creek will improve after the channel manipulations are completed. The diversity of habitats offered by the riffles, pools and runs are outwardly attractive as well as ecologically necessary by different biota.

9. **Historical and archaeological sites**

The proposed activity will be confined to those areas of the stream channel that have been disturbed by fluvial process of the stream and/or the process of grazing livestock.

Since the entire area is located on privately owned property and the changes occurred over time as a result of quasi-natural processes, this action does not appear to meet the definition of an "undertaking" as described in the state antiquities act.

B. **Impacts to the Human Environment**

7. **Access to & quality of recreational activities**

The public will realize increased wild fish populations, particularly the native species - cutthroat and bull trout - in the North Fork and manistem of the Blackfoot River. Additionally, the landowner is willing to offer tours of the restoration effort. These tours are commonly sponsored mainly by DFWP and Trout Unlimited and offer the public opportunities for resource based education. The educational aspects of these projects are important to the recovery of the entire Blackfoot River system.

III. DISCUSSION AND EVALUATION OF REASONABLE ALTERNATIVES

A The "No Action" Alternative

If this project is not completed, the following consequences are likely to result:

- the important and especially productive spring creek environment will not add needed cutthroat and bull trout to the Blackfoot River system,
- the riparian plant community will not recover for the lack of the needed fencing and applied grazing system,
- fishing for wild salmonids within the greater Blackfoot system will not improve,
- the bull trout will continue its decline which will ultimately result in official "listing" as a Federal threatened and endangered species, and
- landowner relationships will not be improved, since cooperation on this mutually beneficial project would not be initiated.

B The Proposed Alternative

The proposed project will result in the following:

- this important and productive spring creek environment will be restored to produce additional cutthroat and bull trout for the Blackfoot River system,
- the riparian plant community will fully recover under the prescribed fencing system and grazing management plan,
- fishing for wild salmonids within the Blackfoot drainage will improve as a result of this added recruitment,
- as habitats critical to bull trout are restored, the likelihood of a continued species decline diminishes - thus the threat of Federal "listing" as a threatened or endangered species also declines, and
- landowner relationships should improve once this cooperative approach to solving mutually beneficial problems becomes known.

IV. ENVIRONMENTAL ASSESSMENT CONCLUSIONS SECTION

A. Is an EIS required? No

This review has clearly demonstrated that the impacts associated with this project are not significant. The net result of the proposed action is a return to a more natural situation.

B. Describe the level of public involvement.

This project was reviewed and supported by the public review panel of the Future Fisheries Improvement program at the February meeting. Additionally, copies of this proposal were sent to all Fish, Wildlife and Parks Commissioners for review.

This Environmental Assessment is being distributed to all individuals and groups listed on the cover letter.

C. Duration of comment period?

Public comment will be accepted through June 20, 1996.

D. Name, title, address and phone number of the person responsible for preparing the Environmental Assessment:

Bruce J. Rehwinkel
Habitat Bureau
Fisheries Division
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701

(406) 444-2432

KRUTAR RANCH

GRAZING MANAGEMENT PLAN

(MAY 29, 1996)

The Krutar Ranch has implemented a five pasture modified deferred rotation grazing system as part of the stream/habitat improvement project. The landowner has constructed both new permanent and temporary electric fencing as part of the management system. Existing pasture fences were used, with larger pastures cross-fenced to create smaller, more manageable grazing units. The pastures are labeled A through F on the enclosed drawing.

The drawing illustrates that the landowner has placed new permanent fences in locations that will protect the stream and will allow for better livestock management. Temporary electric fences have been used as an integral part of the management system during the past four years and will continue to be used to protect fragile streambanks immediately after stream reconstruction work and to provide added protection of critical areas. In additional, the landowner uses the electric fences as needed throughout the system to provide for higher-intensity, lower-duration grazing as resource conditions dictate.

A graphic illustrating the deferred rotation pattern and grazing times is also attached (revised 5/22/96 to better explain the system). The landowner leases grazing rights on the property and grazes only during the months of June through September. The five pasture rotation system (pastures A-E) is used June through August and the cattle then rotated to pasture F after the second cutting of hay. Grazing duration is typically 14-30 days depending on the pasture, the number of cattle (typically 40 AUs), the relative vegetation utilization (i.e. percent use) of grasses and woody vegetation, and moisture conditions along with other factors. Annual variations in precipitation and other factors may cause timing modifications as necessary to maintain plant vigor and animal health.

This deferred rotation grazing system will help protect and improve the vegetation conditions on the ranch and will complement the habitat work to be completed this year as well at the work done in earlier phases of the project. Better livestock management on the ranch will benefit the fishery resources of Rock Creek, the North Fork of the Blackfoot and the Blackfoot River.

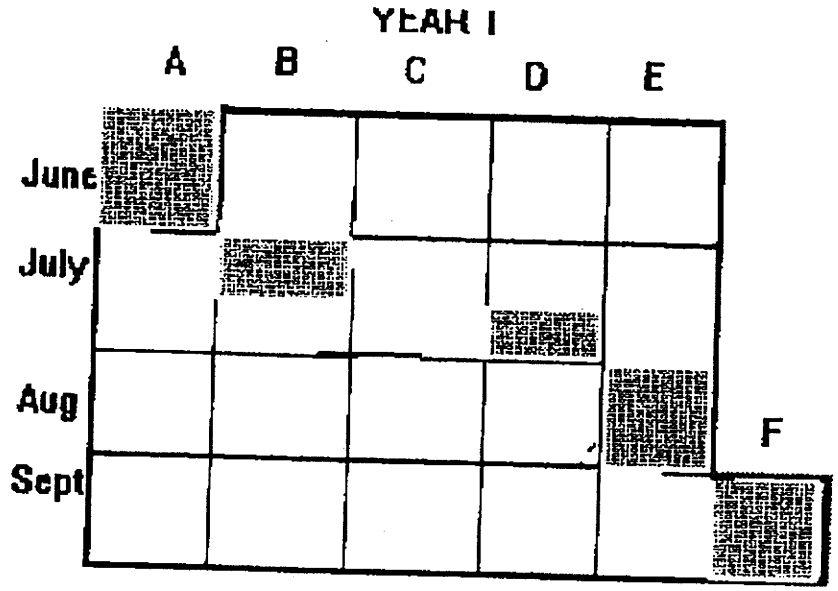
Additional information based on previous comments:

1) Stocking rate = AUs 40

2) Per the revised deferred rotation system, no pasture is grazed at the same time in any consecutive year. In fact, it is at least three years before a pasture is grazed at the same time of year/in the same month. The pasture rotation includes a deferment of pasture C for over one year following restoration work and minimizes impacts to stream banks and associated vegetation. The additional cross-fencing already done by Mr. Krutar will result in proper timing of pasture movement (about 14 days in four of five pastures each year with one pasture longer, about 21-30 day - all depending on vegetation conditions). See graphic.

3) As mentioned, Krutar has begun off-stream water development. A "wet well" was installed in pasture B in 1995 and may be completed on 1996.

4) Bank vegetation is obviously a crucial part of the restoration project and has been considered in the design. Sedge sods will be utilized to the maximum extent possible to help develop and maintain the stability of the restored stream banks. All disturbed areas will be revegetated with the proper sedge, grass or woody vegetation.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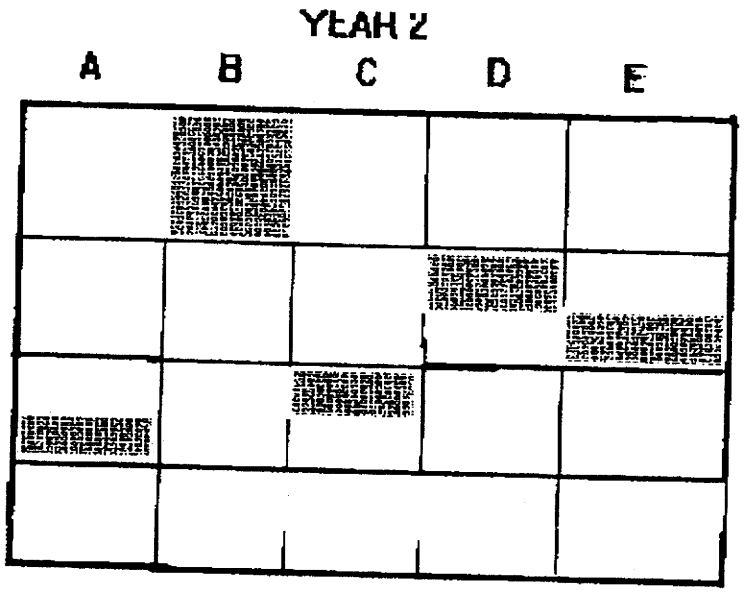
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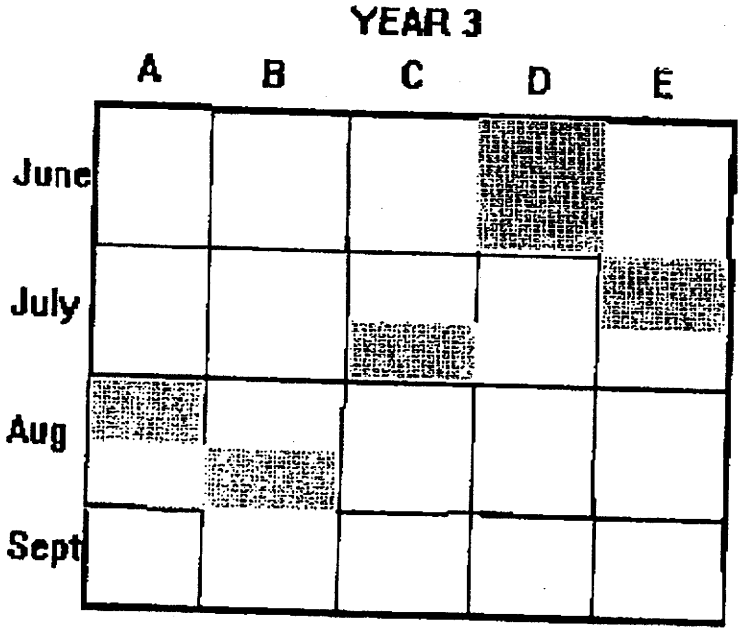
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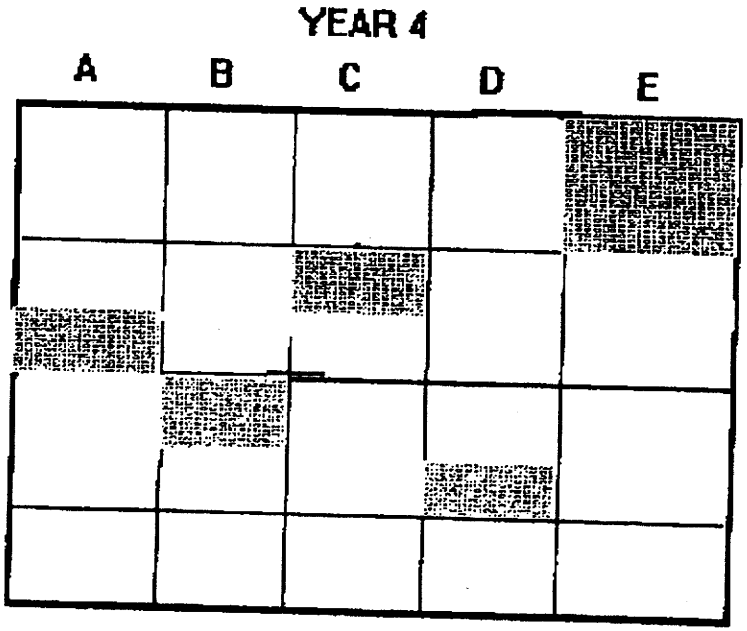
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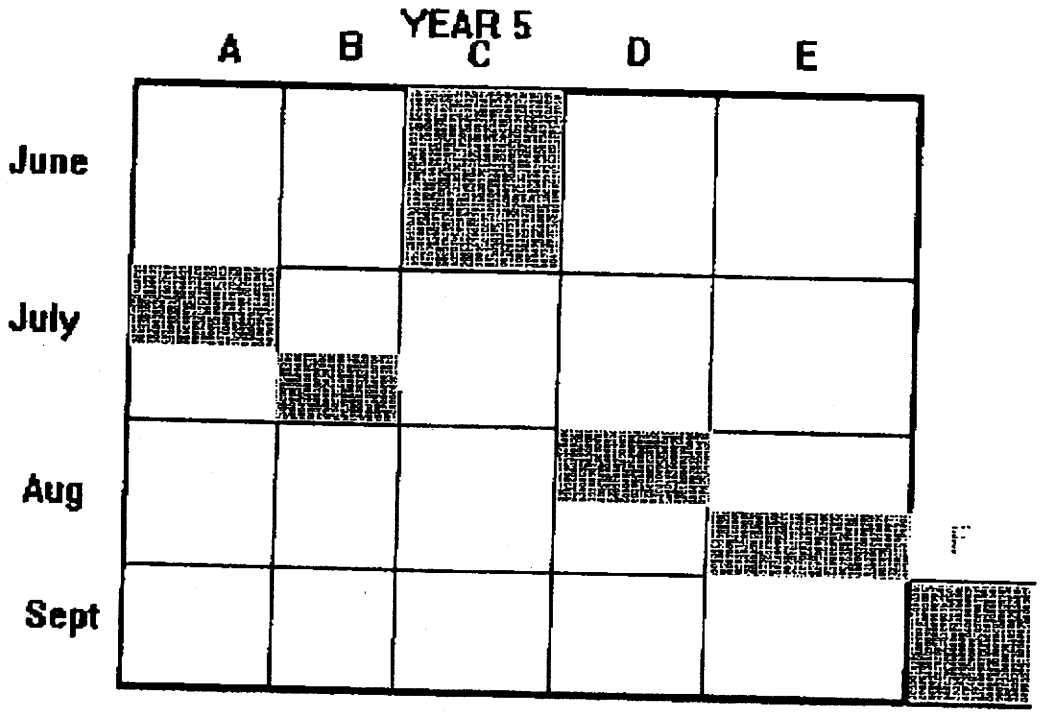
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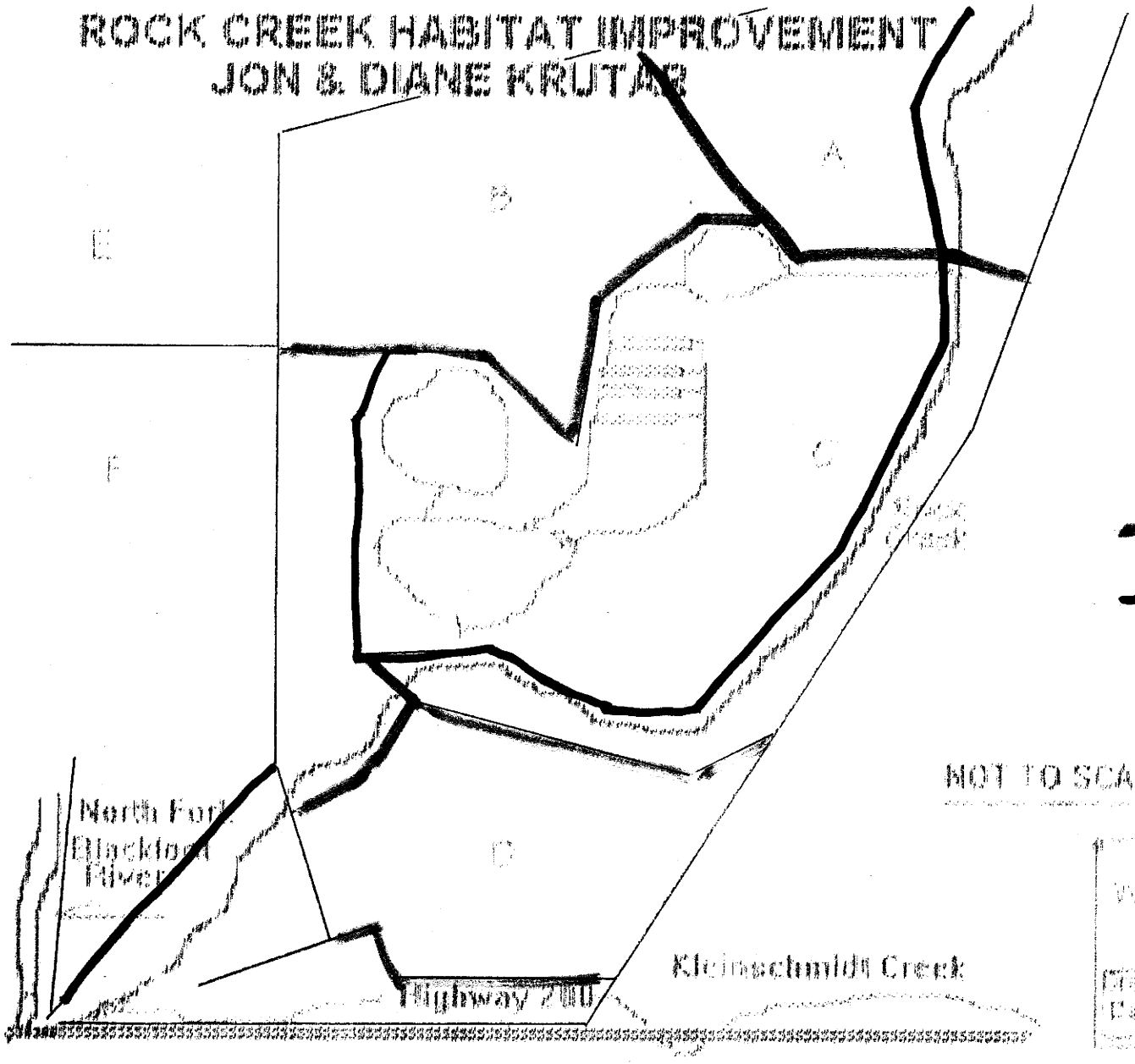
ROCK CREEK HABITAT IMPROVEMENT
JON & DIANE KRUTAR



Fencing codes

EXISTING PERMANENT

New permanent

Temporary electric

NOT TO SCALE

HYDROTECH
Water Resource Consultants
P.O. Box 9257
Helena, MT 59604